

SCHOOL OF
CIVIL ENGINEERING

INDIANA
DEPARTMENT OF HIGHWAYS

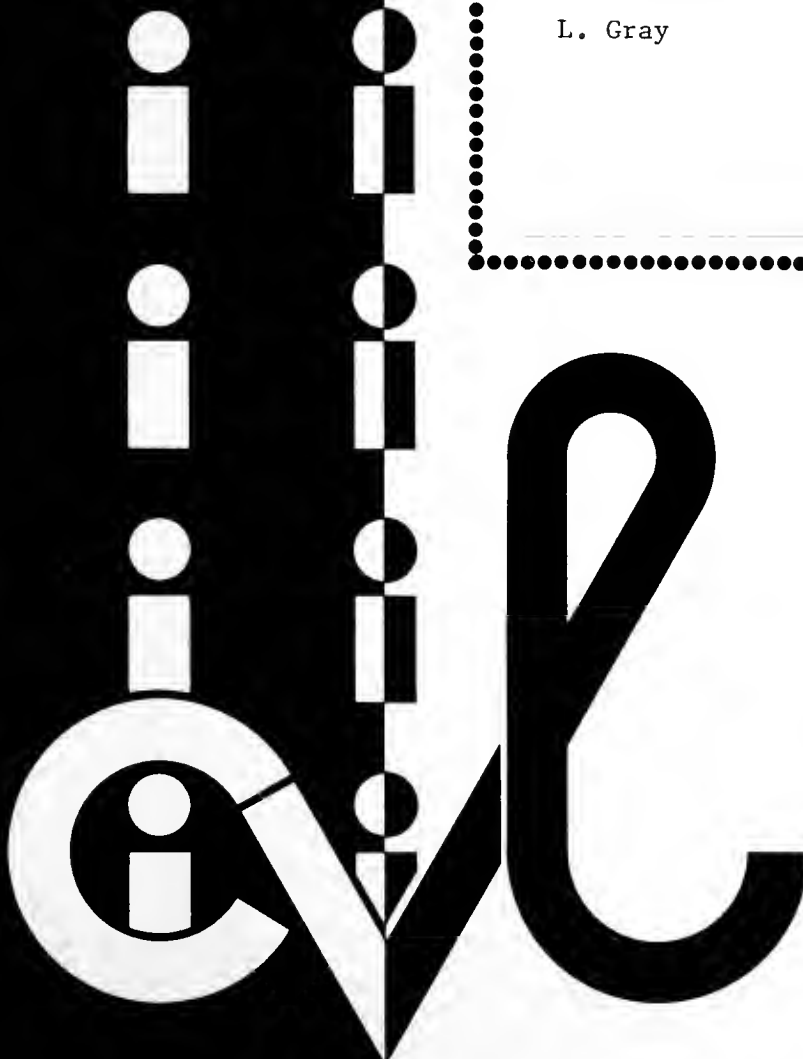
JOINT HIGHWAY RESEARCH PROJECT

JHRP-86-2

TRAFFIC SPEED REPORT NO. 119

D. L. Cochran

L. Gray



PURDUE UNIVERSITY



JOINT HIGHWAY RESEARCH PROJECT

JHRP-86-2

TRAFFIC SPEED REPORT NO. 119

D. L. Cochran

L. Gray

Digitized by the Internet Archive
in 2011 with funding from
LYRASIS members and Sloan Foundation; Indiana Department of Transportation

TRAFFIC SPEED REPORT NO. 119

To: Harold L. Michael, Director
Joint Highway Research Project

March 27, 1986

File: 8 - 3 - 3

From: David L. Cochran, Engr. Tech.
Joint Highway Research Project

Project: C - 36 - 10C

The attached Progress Report No. 119 is the report of the June-September 1985 study of free flow automobile and truck speeds on tangent, level and dry sections of rural interstate, urban interstate, 4-lane and 2-lane highways in Indiana. This report was prepared by David L. Cochran. Data were collected by David Cochran with the assistance of Leroy Gray.

The results of this report show that all types of vehicles, on all types of Indiana highways, had an average free flow speed of 57.2 mph in 1985. This indicates a reduction of 0.5 mph from 1984. If the two urban interstates are excluded, the average speed becomes 56.9 mph in 1985. This indicates a reduction of 0.7 mph from 1984.

This report includes a chart, Figure 2 on page 8, that graphically summarizes the results of summer free flow speed monitoring since 1975. This report also includes a table, Table 8 on page 9, that summarizes the change in speeds in 1985 from 1984.

Copies of this report will be sent to the Indiana DOH. Copies of this report are requested for release to the Indiana State Police and other highway safety agencies, which is normal procedure for these reports.

Respectfully submitted,



David L. Cochran
Traffic Research

cc: A.G. Altschaeffl	D.E. Hancher	B.K. Partridge
J.M. Bell	M.K. Hunter	K.C. Sinha
M.E. Cantrall	J.F. McLaughlin	C.A. Venable
W.F. Chen	K.M. Mellinger	E.W. Walters
W.L. Dolch	H.L. Michael	
R.L. Eskew	P.L. Owens	

TRAFFIC SPEED REPORT NO. 119

by

David L. Cochran, Engr. Tech.
Joint Highway Research Project

Leroy Gray
Traffic Engineering Technician

Joint Highway Research Project
Project No.: C - 36 - 10C
File No.: 8 - 3 - 3

Prepared as Part of an Investigation
Conducted by

Joint Highway Research Project
Engineering Experiment Station,
Purdue University,

in Cooperation with the
Indiana Department of Highways

Purdue University
West Lafayette, Indiana 47907

March 27, 1986

This report is an analysis of spot speed observations made during the 1985 summer months of June, July, August and September. All observations were made of free-flowing vehicles on level, tangent sections of rural and urban highways under favorable conditions. All observations were made during daylight hours.

This is the fifth report with exclusively summer observations since 1975. From 1976 until 1980 (Traffic Speed Reports #95 through #114), 14 primary and secondary stations, as well as another 14 randomly selected stations, were monitored every quarter in conjunction with the 55 mph speed compliance certification program performed for the Federal Highway Administration. Since 1981 the State and Federal studies have been conducted separately.

Fourteen speed monitoring stations were used for the 1985 traffic Speed Report calculations. These stations are divided into four categories which include: four rural interstate locations, four rural four-lane locations, four rural two-lane locations and two urban interstate locations. These 14 stations are the same as the primary and secondary control stations monitored since 1975 in Indiana. Prior to 1975, only the 12 rural stations were monitored. The locations of the 12 rural stations are essentially the same since 1970 except for stations 4L-32 (formerly number 6 on US 52) and 2L-54 (formerly number 11 on US 31), which changed in 1975.

The speed limit at all the stations is 55 mph. The site locations are given in Table 1 and shown in Figure 1.

The vehicles were classified as Indiana or Non-Indiana Passenger Cars and light trucks (less than 5000 lbs. gross weight) or heavy trucks (equal to or more than 5000 lbs. gross weight). Computer analysis was performed for each vehicle classification and for combined passenger cars and combined trucks.

1. Sample Size

At each station, a minimum of 200 vehicles in each direction were recorded using the free flow technique at that location. At least 25 of these vehicles, in each direction, were required to be heavy trucks.

2. Equipment and Field Procedure

The observations for this study were obtained by use of a Kustom Signals Model HR-8 K-Band radar gun. The burst method, using the on/off switch, was used to record speeds. This method was used to avoid early detection by radar detectors. Speeds were taken from within a van or sedan parked on the right shoulder of the road or parked in an access driveway to the road. The

Table 1: Monitoring Locations

Rural Interstate Highways

RI-06	I-65	7.5 Miles North of SR 160, Mile Marker 22.5
RI-12	I-74	0.1 mile West of Mile Marker 109
RI-21	I-69	1.6 Miles South of SR 18, Mile Marker 62.6
RI-34	I-65	2.0 Miles South of SR 39, Mile Marker 135

4-Lane Highways

4L-17	US 52	150 Feet East of CR 475W (Tippecanoe Co.)
4L-20	US 41	1.1 Miles North of SR 2
4L-21	US 31	0.8 Mile North of SR 38 (Moved)
4L-32	US 30	3.4 Miles West of US 421

2-Lane Highways

2L-18	US 35	2.5 Miles East of I-69
2L-54	US 231	1.1 Miles South of SR 234
2L-79	SR 25	0.7 Mile South of Americus
2L-91	SR 43	2.0 Miles South of Chalmers

Urban Interstate Highways

UI-01	I-80	First Bridge East of Burr St. Interchange
UI-06	I-65	Just East of White River

observers were equipped with a CB radio to monitor possible radio notification of speed measurement and of police vehicles in the area. When radar speed recording was detected, and subsequently broadcast on the CB radio, speeds were not taken for at least 5 minutes. This problem occurred primarily on interstate highways.

The accuracy of the radar gun was checked at the beginning of each data recording session, every time the sampling technique was changed, and at other times when deemed necessary.

3. Results of Analysis

The free flow data collected were analyzed and are summarized for each station in Tables A1 through A14 in the Appendix. Tables A15 through A18 summarize the free flow data by highway classification. Table A19 is the summary for all 14 highways. Table A20 is the summary for all 12 rural highway classifications.

The results of the free flow data categorized by highway classification and vehicle type are shown in Tables 2 through 5.

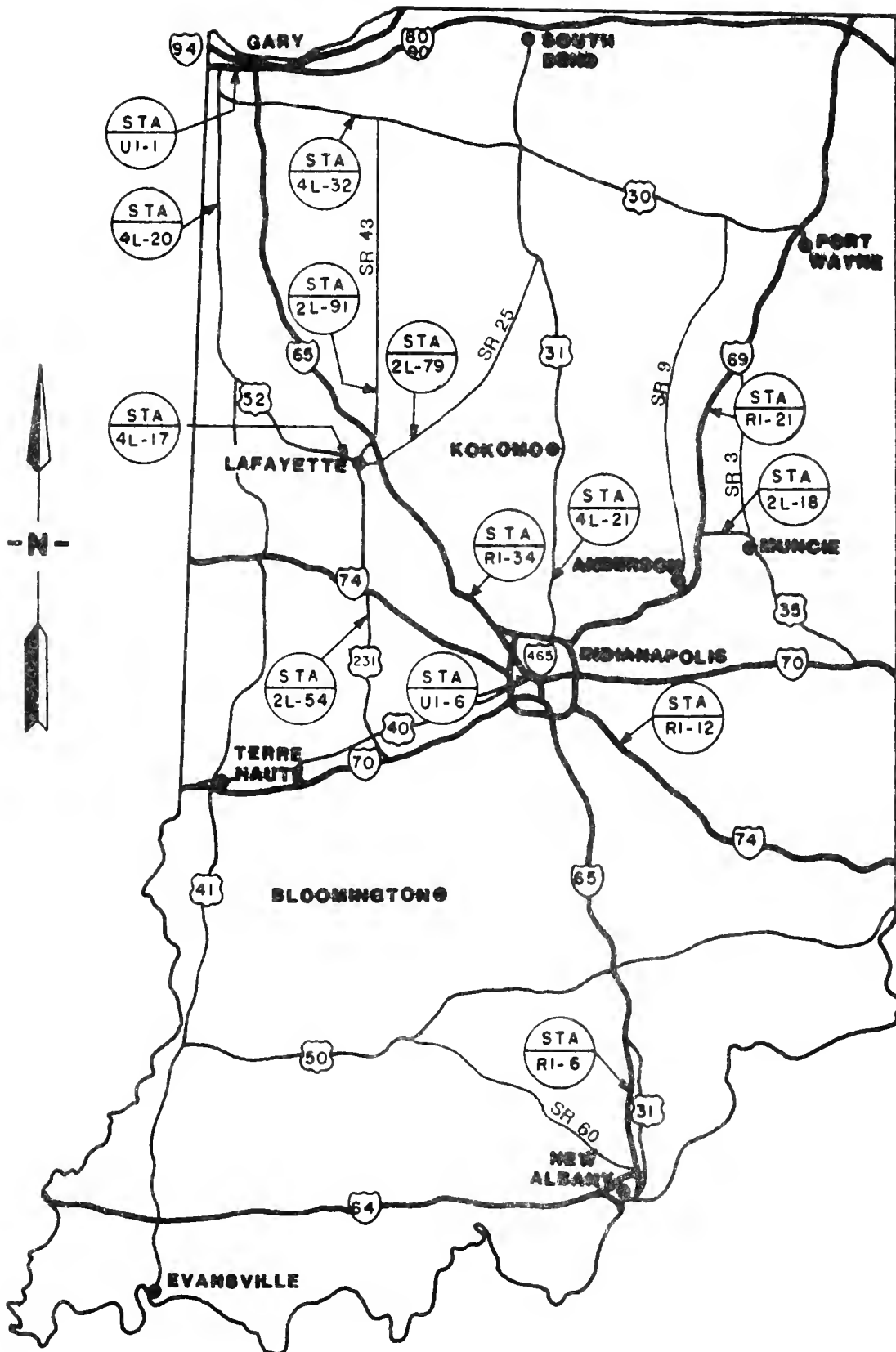


FIGURE 1. LOCATION OF SPEED-STUDY STATIONS

Table 2: Average Speed MPH

	Interstate		Other Rural		All	
	Urban	Rural	4-Lane	2-Lane	Sites	Rural
Passenger Cars:						
Indiana	59.5	59.2	56.9	55.8	57.3	57.0
Non-Indiana	59.3	60.1	58.3	55.5	59.0	58.8
All Passenger Cars	59.4	59.5	57.2	55.7	57.7	57.4
85 Percentile (all)	63.7	63.6	61.3	60.5	62.3	62.0
15 Percentile (all)	54.4	54.5	52.3	50.0	52.3	52.1
Trucks:						
Less than 5000 lbs.	58.4	58.0	56.3	55.4	56.7	56.4
5000 lbs. or more	57.3	57.6	55.4	53.9	56.2	55.9
All Trucks	57.7	57.7	55.8	54.8	56.4	56.1
85 Percentile (all)	60.9	61.7	60.6	59.4	60.7	60.6
15 Percentile (all)	53.1	53.1	50.3	49.2	51.1	50.7
All Vehicles:						
Average	58.7	58.9	56.7	55.4	57.2	56.9
85 Percentile	62.8	62.9	61.0	60.1	61.8	61.6
15 Percentile	53.9	54.0	51.4	49.6	51.9	51.5

Table 3: Percent of Vehicles Exceeding 55 MPH

	Interstate		Other Rural		All	
	Urban	Rural	4-Lane	2-Lane	Sites	Rural
Passenger Cars:						
Indiana	81.0	80.8	63.6	50.1	64.8	62.5
Non-Indiana	83.9	84.7	76.4	52.8	79.1	77.5
All Passenger Cars	82.1	82.2	66.3	50.3	68.2	65.6
Trucks:						
Less than 5000 lbs.	74.3	70.5	54.4	48.7	58.7	56.3
5000 lbs or more	70.8	66.3	53.5	36.8	57.9	54.4
All Trucks	72.0	67.9	53.9	43.7	58.3	55.3
All Vehicles:	78.0	76.9	61.5	48.1	64.5	61.9

Table 4: Percent of Vehicles Exceeding 60 MPH

	Interstate		Other Rural		All	
	Urban	Rural	4-Lane	2-Lane	Sites	Rural
Passenger Cars:						
Indiana	38.9	36.6	22.1	17.1	25.7	23.8
Non-Indiana	34.4	44.1	28.7	15.7	34.9	35.1
All Passenger Cars	37.2	39.3	23.5	17.0	27.9	26.2
Trucks:						
Less than 5000 lbs.	27.9	26.8	18.0	13.1	19.7	18.4
5000 lbs. or more	17.1	21.9	18.5	9.6	17.5	17.6
All Trucks	20.8	23.7	18.2	11.6	18.5	18.0
All Vehicles:	30.5	33.5	21.4	15.2	24.4	23.2

Table 5: Percent of Vehicles Exceeding 65 MPH

	Interstate		Other	Rural	All	
	Urban	Rural	4-Lane	2-Lane	Sites	Rural
Passenger Cars:						
Indiana	11.2	9.2	3.1	4.3	5.9	5.2
Non-Indiana	7.2	11.5	6.1	3.9	8.3	8.7
All Passenger Cars	9.6	10.0	3.7	4.2	6.5	5.9
Trucks:						
Less than 5000 lbs.	5.5	6.0	4.8	2.7	4.4	4.3
5000 lbs. or more	2.8	3.0	2.7	1.5	2.6	2.5
All Trucks	3.7	4.1	3.7	2.2	3.4	3.4
All Vehicles:	7.2	7.8	3.7	3.5	5.3	5.0

The results of this study and similar studies conducted since 1975 are tabulated in Table 6. The speed values for 1975 to 1978 were calculated from the tables given in the respective appendicies of the reports (nos. 94, 98, 102, 106) for the 14 locations used in this study. The 15th and 85th percentile speed values for 1979 through 1985 were calculated by interpolation over 1 mph speed intervals from the raw data.

Table 6: Summary of Spot Speed Observations on Indiana Highways
(Free-Moving Vehicles on Level, Tangent Sections)

	----Passenger Cars----				-----Trucks-----				-Combined-	
	Ind. Mean	Non- Ind. Mean	All Mean	All 85%	Lgt. Mean	Hvy. Mean	All Mean	All 85%	All Mean	All 85%
2-Lane :										
1975	57.2	57.4	57.8	62.9	57.5	56.2	55.7	61.3	56.9	62.2
1976	56.0	57.3	56.1	61.5	54.9	55.0	54.9	60.6	54.9	60.9
1977	56.7	56.2	56.7	62.3	56.3	54.7	54.6	60.4	55.4	60.9
1978	56.8	57.1	56.8	61.9	55.4	55.9	55.2	61.1	55.7	61.3
1979	56.4	56.0	56.4	60.5	55.1	55.6	55.6	61.1	55.4	61.4
1980	55.2	58.4	55.3	59.7	55.1	54.9	54.9	60.2	55.0	60.2
1981	55.7	56.2	55.8	60.2	55.0	54.7	54.8	59.9	54.8	59.9
1982	55.8	57.2	56.0	60.2	54.8	54.9	54.9	59.7	54.9	60.0
1983	56.3	55.8	56.2	60.7	55.0	54.6	54.8	59.3	55.7	60.2
1984	56.5	56.9	56.6	60.9	55.2	55.1	55.2	59.8	56.0	60.4
1985	55.8	55.5	55.7	60.5	55.4	53.9	54.8	55.4	55.4	60.1
4-Lane :										
1975	57.6	58.1	57.7	62.8	56.4	55.9	56.1	62.3	56.1	62.3
1976	57.0	57.2	57.1	62.3	55.5	56.6	56.6	62.2	54.7	61.8
1977	57.7	58.7	57.9	62.9	56.0	57.3	56.2	61.9	56.9	62.1
1978	57.5	57.8	57.5	62.5	56.0	57.7	56.9	61.5	56.9	62.1
1979	56.3	57.0	56.5	61.1	55.7	56.4	56.5	62.3	56.1	61.6
1980	55.9	57.4	56.2	60.5	55.3	56.4	55.9	61.4	55.9	60.5
1981	56.5	58.0	56.8	61.1	56.3	56.1	56.2	61.5	56.2	61.0
1982	56.6	57.6	56.8	61.1	55.1	55.7	55.4	61.1	55.4	61.8
1983	57.4	58.0	57.5	61.7	56.4	56.4	56.4	61.7	57.1	61.4
1984	57.7	58.6	57.9	61.9	57.0	56.8	56.9	61.4	57.5	61.7
1985	56.9	58.3	57.2	61.3	56.3	55.4	55.8	60.6	56.7	61.0
Rural Interstate :										
1975	59.7	60.2	59.9	64.2	58.2	59.3	57.5	62.6	58.9	62.1
1976	59.0	60.3	59.4	63.0	58.5	58.9	58.0	62.6	58.3	62.7
1977	60.4	60.5	60.4	65.4	58.4	59.7	57.3	63.9	59.3	64.2
1978	59.2	60.3	59.7	63.7	58.9	59.8	59.8	64.8	59.5	64.6
1979	58.4	58.9	58.6	62.4	57.6	59.3	59.5	64.5	58.7	64.0
1980	58.4	59.7	58.8	62.3	57.6	57.2	59.8	62.6	58.3	62.5
1981	57.9	59.6	58.6	62.3	57.4	58.8	58.4	62.9	58.4	62.4
1982	58.9	59.5	58.9	62.2	58.0	58.2	58.1	62.7	58.1	62.1
1983	59.2	60.0	59.5	63.1	58.5	58.7	58.6	62.8	59.2	62.8
1984	59.3	60.5	59.8	63.6	58.4	58.1	58.2	61.8	59.1	62.9
1985	59.2	60.1	59.5	63.6	58.0	57.6	57.7	61.7	58.9	62.9
Urban Interstate :										
1981	57.7	58.5	57.9	62.2	57.2	56.5	56.8	61.7	57.5	61.5
1982	57.7	57.8	57.7	61.9	56.8	55.7	56.1	61.2	57.0	62.1
1983	58.7	58.2	58.6	61.9	57.8	57.2	57.4	61.4	58.2	61.6
1984	58.8	58.4	58.7	62.8	58.1	56.4	57.0	60.7	58.0	62.1
1985	59.5	59.3	59.4	63.7	58.4	57.3	57.7	60.9	58.7	62.8

Figure 2 represents a graphic presentation of the results from this and similar studies since 1975. The speed values plotted in Figure 2 were obtained in the same way as those in Table 6. Only data collected at the 12 rural stations were used to calculate the values in Figure 2.

Table 7 shows the average speeds for all passenger cars, trucks of more than 5000 lbs. and trucks less than 5000 lbs. with and without the two urban interstate stations. The urban interstates were first monitored in 1975.

Table 7: Average Speeds (mph)

Year	Passenger Cars		Trucks Less Than 5000 lbs.		Trucks 5000 lbs. or More	
	12 Rural Stations	All 14 Stations	12 Rural Stations	All 14 Stations	12 Rural Stations	All 14 Stations
1975	58.5	58.7	57.2	57.4	57.8	57.5
1976	57.5	57.6	56.3	56.4	56.4	56.6
1977	58.2	58.2	57.7	57.8	57.0	57.1
1978	58.2	58.2	57.9	57.8	56.6	56.6
1979	57.1	61.8	57.2	57.0	56.0	56.1
1980	56.7	56.8	56.8	56.6	56.0	56.1
1981	57.0	57.1	56.7	56.3	56.1	56.6
1982	57.2	57.3	55.8	55.9	56.4	56.3
1983	57.8	57.9	56.5	56.6	56.7	56.8
1984	58.1	58.3	56.7	56.9	56.9	56.8
1985	57.4	57.7	56.4	56.7	55.9	56.2

4. SUMMARY

Since the mean speeds are almost the same for the 12 rural stations (Table 7) as for the 14 urban and rural stations, there is no reason to expect that the results in Figure 2 would change significantly if the urban interstate stations were included in the analysis. However, for consistency in the analysis and historical reporting, the urban interstate locations are reported only in the various tables. A tabulation of speed changes from 1984 to 1985 is included in Table 8. The urban interstate highways showed speed increases (Table 8) in all three vehicle categories in 1985 from 1984. Heavy trucks registered the largest increase at 0.9 mph, passenger cars increased by 0.7 mph, and light trucks increased by 0.3 mph.

All three vehicle categories: passenger cars, light trucks (less than 5000 lbs.) and heavy trucks (greater than 5000 lbs.), showed decreases in speeds (Table 8) on Indiana rural interstates, 4-lane highways and 2-lane highways. The only exception was light trucks, which increased slightly by 0.2 mph on 2-lane highways.

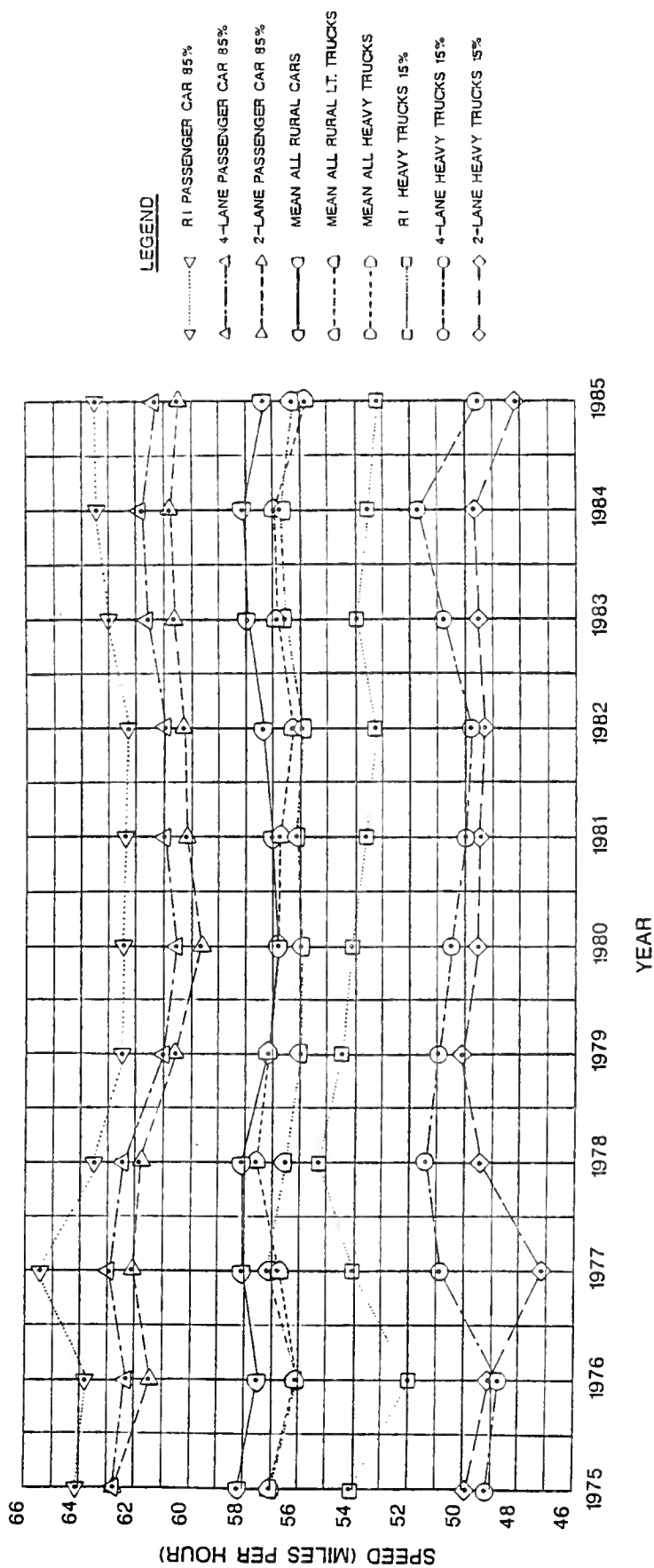


FIGURE 2. INDIANA RURAL SPEED TRENDS

The average speed of passenger cars on all types of rural Indiana highways decreased (Table 8) by 0.7 mph in 1985 from 1984. Average speeds decreased by 0.7 mph on 4-lane highways, 0.9 mph on 2-lane highways, while a decrease of 0.3 mph was observed on rural interstates. The 85th percentile of passenger cars on all types of rural Indiana highways also decreased by 0.5 mph from 1984.

The average speed of light trucks (less than 5000 lbs.) on all types of rural Indiana highways decreased (Table 8) by 0.3 mph in 1985 from 1984. The largest decrease in speed of 0.7 mph was observed on 4-lane highways; while rural interstates decreased by 0.4 mph. On the other hand, speeds on 2-lane highways increased slightly by 0.2 mph. The 85th percentile of light trucks on all types of rural Indiana highways decreased by 0.2 mph from 1984.

The average speed of heavy trucks (greater than 5000 lbs.) on all types of rural Indiana highways decreased (Table 8) by 1.0 mph in 1985 from 1984. The largest decrease in speed of 1.4 mph was noticed on 4-lane highways, followed closely by a decrease of 1.2 mph on 2-lane highways. A reduction in average speeds of 0.5 mph was observed on rural interstates. The 85th percentile of heavy trucks on all types of rural Indiana highways decreased by 0.9 mph from 1984.

Table 8: Summary of Changes in Speed (mph)
from 1984 to 1985

Speed Category:	All Cars	L Trucks	H Trucks	All Veh.
Mean (Rural Interstate)	- 0.3	- 0.4	- 0.5	- 0.2
Mean (4-Lane)	- 0.7	- 0.7	- 1.4	- 0.8
Mean (2-Lane)	- 0.9	+ 0.2	- 1.2	- 0.6
Mean (All Rural)	- 0.7	- 0.3	- 1.0	- 0.7
15th % (All Rural)	- 0.9	- 0.3	- 1.6	- 0.9
Median (All Rural)	- 0.7	- 0.5	- 1.0	- 0.7
85th % (All Rural)	- 0.5	- 0.2	- 0.9	- 0.3
Mean (^{Urban} Rural Interstate)	+ 0.7	+ 0.3	+ 0.9	+ 0.7
Mean (All-14)	- 0.6	- 0.2	- 0.6	- 0.5
15th % (All-14)	- 0.9	- 0.1	- 1.0	- 0.6
Median (All-14)	- 0.5	- 0.4	- 0.5	- 0.4
85th % (All-14)	- 0.2	- 0.3	- 0.5	- 0.2

The 85th percentile, mean, and 15th percentile speed changes on all rural Indiana highways are also illustrated in Figure 2. The average speeds of cars, light trucks and heavy trucks have remained virtually the same since 1979. Mean and 85th percentile speeds dropped sharply from the summer of 1973 to to the summer of 1974 due to the implementation of the 55 mph speed limit.

The speeds varied slightly, up and down, from 1975 through 1978 (Figure 2); however, some stabilization was realized from 1979 through 1982. Speeds appeared to increase slightly in 1983 and 1984 above previous levels. A decrease in speeds was observed in 1985 for all categories, except for 85th percentile speeds for passenger cars on rural interstates, where no change occurred.

The 85th percentile speeds for passenger cars on 4-lane highways decreased by 0.6 mph (Figure 2) in 1985 from 1984, while 2-lane speeds decreased by 0.4 mph from 1984. No change in 85th percentile speeds were observed in 1985 from 1984 on rural interstates.

The mean speeds of all three vehicle categories, on all types of rural Indiana highways, decreased in 1985 from 1984 (Figure 2). Heavy trucks registered the largest decrease at 1.0 mph, passenger cars decreased by 0.7 mph, and light trucks decreased slightly by 0.3 mph.

The 15th percentile speeds for heavy trucks decreased sharply in 1985 from 1984 levels (Figure 2) in two highway categories. The largest decrease of 2.1 mph was observed on 4-lane highways, and a 1.6 mph decrease occurred on 2-lane highways. The rural interstates decreased slightly by 0.4 mph.

The mean speeds for all vehicles on all types of rural Indiana highways decreased (Table 8) in 1985 from 1984 by 0.7 mph. If the urban interstate locations are included in the analysis, the mean speeds for all types of vehicles on all types of Indiana highways decreased by 0.5 mph in 1985 from 1984.

The 85th percentile speeds for all vehicles on all types of rural Indiana highways decreased (Table 8) in 1985 from 1984 by 0.3 mph. If the urban interstate locations are included in the analysis, the 85th percentile speeds for all types of vehicles on all types of Indiana highways decreased by 0.2 mph in 1985 from 1984.

APPENDIX A

Speed Data (Tables A1 to A20)

TABLE A2 : SPEED DATA

STATION: UI-06			HIGHWAY: I-65			LOCATION: 1.0 MILE NORTH (WEST) OF WHITE RIVER (TEMPORARY DUE TO CONSTRUCTION IN AREA)												WEATHER: CLOUDY																																																								
NO. OF LANES: 4			TYPE OF SURFACE: CONCRETE												LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118)																																																											
THIS OBSERVATION			DATE: 8/20/85												DATE: 7/31/84																																																											
TIME: 1:23 PM			TIME: 10:09 AM																																																																							
			PASSENGER CARS												TRUCKS																																																											
			ALL												INDIANA												NON-INDIANA												ALL												<5000 LBS.												>5000 LBS.											
OBSERVATION			LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT																																									
NUMBER OF VEHICLES			445	485	374	351	71	134	209	216	98	108	111	108	111	108	111	108	111	108	111	108	111	108	111	108	111	108	111	108	111	108	111																																									
AVE. SPEED (MPH)			59.79	60.64	59.71	60.58	60.24	60.79	57.92	58.57	59.11	58.96	56.87	58.18	56.87	58.18	56.87	58.18	56.87	58.18	56.87	58.18	56.87	58.18	56.87	58.18	56.87	58.18	56.87	58.18	56.87	58.18																																										
STANDARD DEVIATION			4.215	4.964	4.241	5.073	4.072	4.679	4.555	4.213	4.797	4.445	4.069	3.950	4.069	3.950	4.069	3.950	4.069	3.950	4.069	3.950	4.069	3.950	4.069	3.950	4.069	3.950	4.069	3.950	4.069	3.950																																										
PERCENT			24 MPH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																										
OF			29 MPH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																										
VEHICLES			34 MPH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																										
TRAVELING			39 MPH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																										
LESS THAN			44 MPH	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																										
OR			49 MPH	99.1	96.1	99.2	96.0	98.6	96.3	99.0	99.1	98.0	99.1	100.0	99.1	100.0	99.1	100.0	99.1	100.0	99.1	100.0	99.1	100.0	99.1	100.0	99.1	100.0	99.1	100.0	99.1	100.0																																										
EQUAL TO			74 MPH	100.0	99.2	100.0	99.1	100.0	99.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0																																										
			79 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0																																										
			84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0																																										
			89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0																																										
DIRECTION: SB																																																																										
# OF VEHICLES			193	242	162	177	31	65	111	131	54	69	57	62	54	69	57	62	54	69	57	62	54	69	57	62	54	69	57	62	54	69																																										
AVERAGE SPEED			60.15	61.13	60.04	60.74	60.81	62.20	58.56	59.25	59.39	59.35	57.77	59.15	57.77	59.15	57.77	59.15	57.77	59.15	57.77	59.15	57.77	59.15	57.77	59.15	57.77	59.15	57.77	59.15	57.77	59.15																																										
DIRECTION: NB																																																																										
# OF VEHICLES			252	243	212	174	40	69	98	95	44	39	54	46	44	39	54	46	44	39	54	46	44	39	54	46	44	39	54	46	44	39																																										
AVERAGE SPEED			59.51	60.14	59.46	60.41	59.80	59.46	57.19	57.52	58.77	58.28	55.91	56.87	58.77	58.28	55.91	56.87	58.77	58.28	55.91	56.87	58.77	58.28	55.91	56.87	58.77	58.28	55.91	56.87	58.77	58.28																																										

TABLE A3 - SPEED DATA

STATION: RI-06 HIGHWAY: I-65 LOCATION: 7.5 MILES NORTH OF SR 160, MILE MARKER 22.5

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: OVERCAST
 THIS OBSERVATION DATE: 8/1/85 LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118)
 DATE: 5/9/84
 TIME: 4:24 PM TIME: 9:45 AM

PASSENGER CARS										TRUCKS									
		ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.							
OBSERVATION	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST	PRES-ENT	LAST
NUMBER OF VEHICLES	276	325	160	163	116	162	211	196	44	68	167	128							
AVE. SPEED (MPH)	60.29	59.74	59.41	59.34	61.52	60.14	58.31	57.72	59.50	57.79	58.00	57.69							
STANDARD DEVIATION	4.628	4.414	4.319	4.425	4.776	4.379	3.928	3.778	4.061	4.297	3.843	3.488							
PERCENT OF VEHICLES	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.							
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.							
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.							
34 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.							
39 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.							
44 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.							
49 MPH	1.1	0.9	1.9	1.2	0.	0.6	0.5	1.5	0.	2.9	0.6	0.8							
54 MPH	8.7	9.5	11.9	11.0	4.3	8.0	12.7	18.4	9.1	20.6	15.0	17.2							
59 MPH	43.1	53.2	51.9	57.1	31.0	48.4	64.0	72.4	54.5	66.2	66.5	75.8							
TRAVELING LESS THAN 64 MPH	87.7	84.0	90.0	87.1	84.5	80.9	92.9	95.9	81.8	95.6	95.8	96.1							
OR 69 MPH	96.7	99.4	98.8	99.4	94.0	99.4	98.6	99.5	100.0	98.5	98.2	100.0							
EQUAL TO 74 MPH	98.9	100.0	100.0	100.0	97.4	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
79 MPH	99.6	100.0	100.0	100.0	99.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
DIRECTION: NB																			
# OF VEHICLES	118	166	56	96	62	70	102	94	25	36	77	58							
AVERAGE SPEED	60.91	59.94	59.80	59.53	61.90	60.50	58.66	57.95	59.68	57.72	58.33	58.09							
DIRECTION: SB																			
# OF VEHICLES	158	159	104	67	54	92	109	102	19	32	90	70							
AVERAGE SPEED	59.83	59.53	59.19	59.07	61.07	59.87	57.99	57.52	59.26	57.88	57.72	57.36							

TABLE A6 : SPEED DATA

STATION: 4L-20		HIGHWAY		US 41		LOCATION: 0.8 MILE NORTH OF SR 2 (TEMPORARY DUE TO CONSTRUCTION IN AREA)																					
NO. OF LANES: 4		TYPE OF SURFACE		ASPHALT		WEATHER: OVERCAST																					
THIS OBSERVATION		LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118)																									
DATE: 8/14/85		DATE: 5/23/84																									
TIME: 12:26 PM		TIME: 10:20 AM																									
PASSENGER CARS																											
TRUCKS																											
ALL				INDIANA				NON-INDIANA				ALL				<5000 LBS.				>5000 LBS.							
OBSERVATION		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT		LAST		PRES- ENT			
NUMBER OF VEHICLES		260		277		187		194		73		83		204		225		84		120		105		120		105	
AVE. SPEED (MPH)		57.55		58.03		57.36		57.60		58.04		59.04		55.74		56.64		56.80		57.02		55.00		56.20		56.20	
STANDARD DEVIATION		5.405		4.611		5.843		4.388		4.074		4.977		6.391		5.055		5.049		5.240		7.110		4.823		4.823	
PERCENT		0.		0.		0.		0.		0.		0.		0.		0.		0.		0.		0.		0.		0.	
OF		1.5		0.		2.1		0.		0.		0.		5.9		0.		2.4		0.		8.3		0.		0.	
VEHICLES		6.5		2.5		8.6		3.1		1.4		1.2		13.7		7.1		6.0		7.5		19.2		6.7		6.7	
TRAVELING		22.3		21.3		25.7		22.2		13.7		19.3		37.3		33.8		29.8		29.2		42.5		39.0		39.0	
LESS THAN		66.9		65.7		65.8		69.1		69.9		57.8		66.2		70.7		60.7		66.7		70.0		75.2		75.2	
OR		92.3		90.6		92.5		93.3		91.8		84.3		97.1		94.2		97.6		92.5		96.7		96.2		96.2	
EQUAL TO		98.5		98.2		98.4		99.0		98.6		96.4		100.0		99.1		100.0		99.2		100.0		99.0		99.0	
		97.2		99.6		98.9		100.0		100.0		98.8		100.0		100.0		100.0		100.0		100.0		100.0		100.0	
		99.6		100.0		99.5		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0	
		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0	
		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0	
		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0		100.0	
DIRECTION: NB																											
# OF VEHICLES		123		150		90		104		33		46		95		97		41		60		54		37		37	
AVERAGE SPEED		55.89		57.66		55.44		57.44		57.12		58.15		52.75		55.24		55.39		55.93		50.74		54.11		54.11	
DIRECTION: SB																											
# OF VEHICLES		137		127		97		90		40		37		109		128		43		60		66		68		68	
AVERAGE SPEED		59.04		58.46		59.14		57.78		58.80		60.14		58.35		57.70		58.14		58.10		58.49		57.34		57.34	

TABLE A9 : SPEED DATA

STATION: 4L-21 HIGHWAY: US 31 LOCATION: 0.8 MILE NORTH OF SR 38
(MOVED DUE TO CONGESTIVE AREA)

NO. OF LANES: 4 TYPE OF SURFACE: ASPHALT WEATHER: CLEAR

THIS OBSERVATION
DATE: 8/18/85
TIME: 2:14 PM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118)
DATE: 5/29/84
TIME: 10:03 AM

PASSENGER CARS										TRUCKS					
ALL										ALL					
INDIANA										NON-INDIANA					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST										LAST					
PRES- ENT										PRES- ENT					
LAST															

TABLE A11 : SPEED DATA

STATION: 2L-18			HIGHWAY: US 35			LOCATION: 2.5 MILES EAST OF I-69			WEATHER: HAZY		
NO. OF LANES: 2			TYPE OF SURFACE: ASPHALT			LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118)					
THIS OBSERVATION			DATE: 7/30/85			DATE: 5/18/84					
			TIME: 12:43 PM			TIME: 10:55 AM					
PASSENGER CARS											
TRUCKS											
ALL											
INDIANA											
NON-INDIANA											
ALL											
<5000 LBS.											
>5000 LBS											
PRES- ENT LAST PRES- ENT LAST PRES- ENT LAST PRES- ENT LAST PRES- ENT LAST PRES- ENT											
OBSERVATION LAST PRES- ENT LAST PRES- ENT LAST PRES- ENT LAST PRES- ENT LAST PRES- ENT LAST PRES- ENT											
NUMBER OF VEHICLES 266 361 232 324 34 37 168 202 61 113 107 89											
AVE. SPEED (MPH) 56.62 53.55 56.50 53.62 57.47 52.92 55.26 52.13 55.07 53.76 55.37 50.06											
STANDARD DEVIATION 5.213 5.377 5.313 5.380 4.453 5.382 5.600 5.382 5.612 4.819 5.616 5.371											
24 MPH 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.											
29 MPH 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.											
34 MPH 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0.											
39 MPH 0. 0. 0. 0. 0. 0. 1.2 0. 0. 0. 1.9 0.											
44 MPH 1.1 3.9 1.3 4.0 0. 2.7 4.8 10.4 3.3 3.5 5.6 19.1											
49 MPH 7.5 22.4 8.2 21.9 2.9 27.0 13.1 24.3 14.8 15.0 12.1 36.0											
VEHICLES 54 MPH 35.0 56.2 35.8 56.2 29.4 56.8 46.4 65.3 49.2 57.5 44.9 75.3											
TRAVELING 59 MPH 72.9 88.4 74.1 88.0 64.7 91.9 75.6 91.6 72.1 86.7 77.6 97.8											
LESS THAN 64 MPH 94.0 97.5 94.0 97.5 94.1 97.3 96.4 99.5 98.4 99.1 95.3 100.0											
OR 69 MPH 98.1 98.9 97.8 99.1 100.0 97.3 100.0 100.0 100.0 100.0 100.0 100.0											
EQUAL TO 74 MPH 99.6 99.7 99.6 99.7 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0											
79 MPH 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0											
84 MPH 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0											
89 MPH 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0 100.0											
DIRECTION: EB											
# OF VEHICLES 117 149 102 136 15 13 100 110 34 58 64 52											
AVERAGE SPEED 56.78 54.52 56.61 54.71 57.93 52.46 56.09 53.15 55.68 54.43 56.30 51.73											
DIRECTION: WB											
# OF VEHICLES 149 212 130 188 19 24 68 92 27 55 41 37											
AVERAGE SPEED 56.50 52.85 56.41 52.82 57.10 53.17 54.04 50.90 54.30 53.05 53.88 47.70											

TABLE A12 : SPEED DATA

STATION: 2L-54		HIGHWAY: US 231		LOCATION: 0.5 MILE SOUTH OF SR 234		WEATHER: OVERCAST											
NO. OF LANES: 2		TYPE OF SURFACE: ASPHALT		LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118)													
THIS OBSERVATION		DATE: 9/5/85		DATE: 7/23/84													
		TIME: 3:11 PM		TIME: 9:45 AM													
OBSERVATION		LAST		PASSENGER CARS												TRUCKS	
				ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.			
NUMBER OF VEHICLES		250	396	226	383	24	13	197	202	119	129	78	73	PRES-ENT			
AVE. SPEED (MPH)		56.72	58.16	56.74	58.13	56.54	59.00	56.01	57.07	56.11	57.32	55.85	56.63	PRES-ENT			
STANDARD DEVIATION		4.740	5.563	4.768	5.640	4.559	2.236	5.776	5.339	6.036	5.290	5.389	5.433	PRES-ENT			
PERCENT OF TRAVELING LESS THAN OR EQUAL TO		24 MPH	0	0	0	0	0	0	0	0	0	0	0	PRES-ENT			
		29 MPH	0	0	0	0	0	0	0	0	0	0	0	PRES-ENT			
		34 MPH	0	0	0	0	0	0.5	0	0.8	0	0	0	PRES-ENT			
		39 MPH	0	0	0	0	0	1.0	0	1.7	0	0	0	PRES-ENT			
		44 MPH	0	1.5	0	1.6	4.2	2.5	2.0	2.5	1.6	2.6	2.7	PRES-ENT			
		49 MPH	5.6	4.0	5.8	4.2	0	12.2	7.4	12.6	5.4	11.5	11.0	PRES-ENT			
		54 MPH	32.4	20.7	32.7	21.4	29.2	36.5	24.8	32.8	21.7	42.3	30.1	PRES-ENT			
		59 MPH	76.0	64.4	75.7	64.5	79.2	76.6	68.3	73.9	65.9	80.8	72.6	PRES-ENT			
		64 MPH	95.6	89.1	95.1	88.8	100.0	92.4	93.1	93.3	92.2	91.0	94.5	PRES-ENT			
		69 MPH	99.2	97.2	99.1	97.1	100.0	99.5	98.0	99.2	97.7	100.0	98.6	PRES-ENT			
		74 MPH	100.0	98.7	100.0	98.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	PRES-ENT			
		79 MPH	100.0	99.5	100.0	99.5	100.0	100.0	100.0	100.0	100.0	100.0	100.0	PRES-ENT			
		84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	PRES-ENT			
		89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	PRES-ENT			
DIRECTION: NB																	
# OF VEHICLES		128	171	118	167	10	4	91	84	53	49	38	35	PRES-ENT			
AVERAGE SPEED		57.34	58.68	57.36	58.64	57.10	60.50	57.45	58.14	57.74	58.00	57.05	58.34	PRES-ENT			
DIRECTION: SB																	
# OF VEHICLES		122	225	108	216	14	9	106	118	66	80	40	38	PRES-ENT			
AVERAGE SPEED		56.07	57.76	56.06	57.73	56.14	58.33	54.76	56.31	54.80	56.90	54.70	55.05	PRES-ENT			

TABLE A13. SPEED DATA

STATION: 2L-79		HIGHWAY: SR 25		LOCATION: 0.7 MILE SOUTH OF AMERICUS		WEATHER: CLOUDY	
NO. OF LANES: 2		TYPE OF SURFACE: ASPHALT		LAST PREVIOUS OBSERVATION (SPEED REPORT NO 118)			
THIS OBSERVATION		DATE: 8/16/85		DATE: 8/8/84			
TIME: 10:03 AM				TIME: 8:25 AM			
PASSENGER CARS							
TRUCKS							
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL				ALL			
ALL							

TABLE A14 : SPEED DATA

STATION: 2L-91

HIGHWAY: SR 43

LOCATION: 2.0 MILES SOUTH OF CHALMERS

NO. OF LANES: 2

TYPE OF SURFACE: ASPHALT

WEATHER: BRIGHT, CLEAR

THIS OBSERVATION

DATE: 7/22/85

TIME: 10:35 AM

LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118)

DATE: 8/7/84

TIME: 8:30 AM

PASSENGER CARS													TRUCKS																			
ALL													INDIANA				NON-INDIANA				ALL				<5000 LBS.				>5000 LBS.			
OBSERVATION		LAST		PRES-ENT		LAST		PRES-ENT		LAST		PRES-ENT		LAST		PRES-ENT		LAST		PRES-ENT		LAST		PRES-ENT		LAST		PRES-ENT				
NUMBER OF VEHICLES																																
		281	345	264	305	17	40	179	178	93	94	86	84																			
AVE. SPEED (MPH)		57.24	57.31	57.22	57.23	57.59	57.98	55.30	56.34	55.03	56.04	55.59	56.68																			
STANDARD DEVIATION		4.889	5.348	4.761	5.404	6.746	4.926	4.872	4.588	5.076	4.250	4.654	4.943																			
PERCENT																																
24 MPH		0	0	0	0	0	0	0	0	0	0	0	0																			
29 MPH		0	0	0	0	0	0	0	0	0	0	0	0																			
34 MPH		0	0	0	0	0	0	0	0	0	0	0	0																			
39 MPH		0.4	0.6	0.4	0.7	0	0	1.1	0	1.1	0	1.2	0																			
44 MPH		1.1	2.0	1.1	2.0	0	2.5	1.7	0.6	1.1	1.1	2.3	0																			
49 MPH		7.1	7.0	6.1	7.2	23.5	5.0	11.2	9.0	11.8	6.4	10.5	11.9																			
54 MPH		23.5	24.6	23.1	26.2	29.4	12.5	37.4	30.3	43.0	30.9	31.4	29.8																			
59 MPH		73.3	67.8	74.2	67.2	58.8	72.5	79.3	75.8	75.3	81.9	83.7	69.0																			
64 MPH		94.3	92.5	94.7	92.1	88.2	95.0	98.3	96.6	97.8	98.9	98.8	94.0																			
69 MPH		99.3	98.6	99.6	98.7	94.1	97.5	100.0	99.4	100.0	98.9	100.0	100.0																			
74 MPH		100.0	99.7	100.0	100.0	100.0	97.5	100.0	100.0	100.0	100.0	100.0	100.0																			
79 MPH		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0																			
84 MPH		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0																			
89 MPH		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0																			
DIRECTION: ND																																
# OF VEHICLES		140	198	129	171	12	27	95	85	52	45	43	40																			
AVERAGE SPEED		56.73	56.61	56.77	56.47	56.33	57.48	55.04	55.65	54.69	55.58	55.47	55.72																			
DIRECTION: SD																																
# OF VEHICLES		141	147	136	134	5	13	84	93	41	49	43	44																			
AVERAGE SPEED		57.74	58.24	57.64	58.20	60.60	58.69	55.58	56.98	55.46	56.47	55.70	57.55																			

TABLE A17 - SPEED DATA

STATION: 4L-ALL HIGHWAY 4-LANE

THIS OBSERVATION DATE: JULY TO SEPTEMBER 1985 LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118) DATE: JUNE TO AUGUST 1984

PASSENGER CARS										TRUCKS									
OBSERVATION		ALL		INDIANA		NON-INDIANA		ALL		<5000 LBS.		>5000 LBS.		>5000 LBS.		PRES-ENT		PRES-ENT	
NUMBER OF VEHICLES	1119	1392	858	1056	261	256	836	888	372	439	464	449							
AVE. SPEED (MPH)	57.93	57.17	57.74	56.87	58.56	58.28	56.88	55.85	57.03	56.29	56.75	55.41							
STANDARD DEVIATION	4.756	4.721	4.883	4.690	4.264	4.675	5.346	5.646	5.106	5.404	5.533	5.847							
PERCENT OF VEHICLES TRAVELING LESS THAN OR EQUAL TO																			
24 MPH	0.	0.	0.	0.	0	0	0.	0.	0.	0.	0.	0.							
29 MPH	0.	0.	0.	0.	0	0	0.1	0.	0.	0.	0.2	0.							
34 MPH	0.	0.1	0.	0.1	0	0	0.4	0.1	0.3	0	0.4	0.2							
39 MPH	0	0.1	0	0.2	0	0	1.0	0.6	0.5	0.	1.3	1.1							
44 MPH	0.7	0.9	0.8	1.0	0.4	0.	2.5	4.5	2.2	1.8	2.8	7.1							
49 MPH	4.5	5.5	5.2	6.0	1.9	3.4	7.2	11.1	6.7	9.1	7.5	13.1							
54 MPH	20.1	26.6	21.8	29.0	14.6	17.6	27.2	38.7	26.1	37.1	28.0	40.3							
59 MPH	63.8	70.4	64.7	72.4	60.9	63.2	67.6	75.5	66.7	73.8	68.3	77.1							
64 MPH	92.6	94.3	93.4	95.3	90.0	90.5	95.5	94.4	95.2	93.2	95.7	95.5							
69 MPH	98.9	97.4	98.8	99.5	99.2	98.6	99.4	99.3	99.5	98.9	99.4	99.8							
74 MPH	99.7	99.9	99.7	100.0	100.0	99.7	100.0	99.9	100.0	99.8	100.0	100.0							
79 MPH	99.9	100.0	99.9	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0							

TABLE A19 : SPEED DATA

STATION: ALL-14 HIGHWAY: URBAN INTERSTATE
RURAL INTERSTATE
4-LANE
2-LANE

THIS OBSERVATION DATE: JULY TO SEPTEMBER 1985 LAST PREVIOUS OBSERVATION (SPEED REPORT NO. 118)
DATE: JUNE TO AUGUST 1984

PASSENGER CARS										TRUCKS			
ALL										ALL			
INDIANA										<5000 LBS.			
NON-INDIANA										>5000 LBS.			
OBSERVATION	LAST	PRES- ENT	LAST	PRES- ENT	LAST	PRES- ENT	LAST	PRES- ENT	LAST	PRES- ENT	LAST	PRES- ENT	PRES- ENT
NUMBER OF VEHICLES	4235	5081	3170	3875	1065	1206	2944	3010	1183	1374	1761	1636	
AVE. SPEED (MPH)	58.25	57.72	57.92	57.33	59.25	58.97	56.85	56.41	56.90	56.66	56.82	56.19	
STANDARD DEVIATION	4.823	5.211	4.819	5.274	4.697	4.797	5.010	5.109	5.174	5.087	4.898	5.119	
24 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
29 MPH	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.1	0.	0.
34 MPH	0.	0.0	0.	0.0	0.	0.	0.1	0.0	0.2	0.	0.1	0.1	0.1
39 MPH	0.	0.2	0.	0.2	0.	0.	0.5	0.2	0.5	0.	0.5	0.4	0.4
44 MPH	0.5	1.1	0.5	1.2	0.5	0.6	1.7	2.4	1.6	1.2	1.8	3.4	3.4
49 MPH	3.6	5.6	4.2	6.5	2.0	2.7	6.9	7.9	6.9	6.7	6.8	8.9	8.9
54 MPH	19.6	24.1	21.6	27.2	13.3	14.1	27.8	32.0	28.1	31.8	27.5	32.2	32.2
59 MPH	62.2	65.0	65.0	67.8	54.0	56.1	70.0	74.5	68.1	72.9	71.3	75.9	75.9
64 MPH	91.5	91.1	92.3	91.9	88.9	88.4	95.2	95.0	94.4	94.0	95.7	96.0	96.0
69 MPH	98.6	98.7	98.7	98.8	98.2	98.4	99.4	99.3	99.2	98.8	99.5	99.7	99.7
74 MPH	99.7	99.7	99.8	99.7	99.4	99.7	100.0	99.9	100.0	99.8	100.0	100.0	100.0
79 MPH	99.9	100.0	100.0	99.9	99.7	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
84 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89 MPH	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

PERCENT
OF
VEHICLES
TRAVELING
LESS THAN
OR
EQUAL TO

COVER DESIGN BY ALDO GIORGINI